Contact Information
Instructor: Susan Whitaker
Office: MCS 220H
Office Phone: (325) 486-5439
e-mail: Susan.Whitaker@angelo.edu
Office Hours: 9:00 – 10:00 AM, 2:00 – 3:00 PM, MTWRF; or by appointment
Note: Office hours will be held in MCS 220 H.

Textbook
Excursions in Modern Mathematics 9th ed. by Peter Tannenbaum, Prentice Hall. You are not required to have a paper copy, an electronic copy is available with your My Math Lab access.

My Math Lab
You are required to have a My Math Lab account through Pearson. You can purchase an access code through the bookstore or online. Once you have purchased an access code, you will need set up your account for this course. The course id is whitaker25282.

Blackboard
This course has an associated Blackboard page where you will have access to grades, assignments, videos, handouts, and other course-related items.

Course Content
2. Weighted Voting: The Banzhaf Power Index, The Shapley-Shubik Power Index
4. Apportionment: Various methods including Hamilton’s, Jefferson’s, Adam’s, and Webster’s; The Alabama Paradox
5. Euler Paths and Circuits: Euler Circuit Problems, Graphs, Euler’s Theorems, Fleury’s Algorithm, Eulerizing Graphs
6. The Traveling Salesman Problem: Hamilton Paths and Circuits, Complete Graphs, Greedy and Nearest Neighbor Algorithms
7. Networks: Trees, Spanning Trees, Kruskal’s Algorithm, Shortest Networks for Three or more points
8. Math of Finance: Percentages, Simple Interest, Compound Interest, Annuities
9. Mathematics of Symmetry: Rigid Motions, Reflections, Rotations Translations, Glide Reflections, Patterns
10. Descriptive Statistics: Graphical Methods, Variables, Data Summaries, Spread
11. Probability: Random Experiments, Sample Spaces, Permutations, Combinations, Equiprobable Spaces, Odds

Grading System
The final average will be determined according to the weights in the table that follows.
<table>
<thead>
<tr>
<th>Activity</th>
<th>Date</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td>7/15</td>
<td>20%</td>
</tr>
<tr>
<td>Test 2</td>
<td>7/23</td>
<td>20%</td>
</tr>
<tr>
<td>Test 3</td>
<td>7/31</td>
<td>20%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>8/7</td>
<td>20%</td>
</tr>
<tr>
<td>Homework</td>
<td>Most Days</td>
<td>20%</td>
</tr>
</tbody>
</table>

**Grading Policy**
To determine the average needed to ensure that you obtain the grade that you want in this course, consult the table that follows.

<table>
<thead>
<tr>
<th>Average</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>89.5 and above</td>
<td>A</td>
</tr>
<tr>
<td>79.5 to 89.5</td>
<td>B</td>
</tr>
<tr>
<td>69.5 to 79.5</td>
<td>C</td>
</tr>
<tr>
<td>59.5 to 69.5</td>
<td>D</td>
</tr>
<tr>
<td>below 59.5</td>
<td>F</td>
</tr>
</tbody>
</table>

**Homework Policy**
- There will be daily assigned exercises from the textbook, MyMathLab or handouts.
- Homework is due at the BEGINNING of class. If you have trouble completing a homework assignment, see me for assistance BEFORE it is due.
- If you are absent, it is your responsibility to contact me or view Blackboard in order to get the new homework assignments.
- You may send your homework to class with a friend, scan or take a picture of it and email it to me. The assignment must be received prior to the beginning of class.
- I will drop 3 homework grades. This is the leeway you are given to allow for absences.

**Exams**
- We will have three regular exams and a non-comprehensive final exam.
- If you miss an exam, you need to get in touch with me immediately! You may be required to take a comprehensive final exam to compensate for the missing exam.
- If you leave the room during an exam, I may take your test and grade it as is.

**Attendance**
- Class attendance will be taken daily.
- You are expected to attend all scheduled class meetings, arrive on time, and stay for the entire class period.
- Perfect attendance will get you 2 points added to your final course grade, 1-2 absences will get you 1 point.

**Calculators**
You will be allowed to use calculators in this class. You do not need to go buy an expensive calculator. If you already have a graphing calculator, that will be sufficient. If you do not have a calculator, an inexpensive one that will work for this course is a TI 30II S. It runs $10-$15.
Math Lab

The math learning lab is available on campus and provides free math tutoring. Please utilize this great resource – no appointment is required.

<table>
<thead>
<tr>
<th>MATH LAB – LIB 330</th>
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</thead>
<tbody>
<tr>
<td>Monday – Friday</td>
</tr>
<tr>
<td>11:00 am – 3:00 pm</td>
</tr>
</tbody>
</table>

Blackboard/Email

I plan to post your daily assignments, class notes, class announcements and other documents on Blackboard. I will expect you to print these documents and bring them to class with you. Blackboard can be accessed through RamPort or by visiting Blackboard. I may send you information via email. It is vital that you regularly check your angelo.edu email account.

Student Responsibilities

The student is solely responsible for:

- Completing each assignment by the specified due date.
- Obtaining assignments and other materials for classes from which they are absent.
- Utilizing, as needed, all available study-aid options (including meeting with the instructor, referring to outside texts, etc.) to resolve any questions that they might have regarding homework, course material, etc.
- Realizing from the beginning of the course the grade that they may need or want to graduate, maintain a scholarship, stay in athletics, etc. … and give as much effort as it takes to obtain this grade.

Common Courtesy

Turn off all cell phones or any other electronic devices before entering the classroom. Place these items in your backpacks. These devices may distract from and hinder learning. I reserve the right to ask you to leave class if your use of such devices prevents anyone from learning.

Please refrain from carrying on personal conversations once class has started. Be courteous to your peers when they are responding in class by listening to what they have to say.

Student Disability Services

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA), and subsequent legislation.

The Office of Student Affairs is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability, and it is the student’s responsibility to initiate such a request by contacting:

Dallas Swafford
Director of Student Disability Services
Office of Student Affairs
325-942-2047
dallas.swafford@angelo.edu
Title IX
Angelo State University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from sex discrimination of any kind. Sex discrimination, sexual misconduct, public indecency, interpersonal violence, sexual assault, sexual exploitation, sexual harassment, and stalking are not tolerated at ASU. As a faculty member, I am a Responsible Employee meaning that I will report any allegations I am notified of to the Office of Title IX Compliance in order to connect students with resources and options in addressing the allegations reported. You are encouraged to report any incidents to ASU’s Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator. You may do so by contacting:

Michelle Boone, J. D.
Director of Title IX Compliance/Title IX Coordinator
Mayer Administration Building, Room 200
325-942-2022
michelle.boone@angelo.edu

You may also file a report online 24/7 at www.angelo.edu/incident-form.

If you are wishing to speak to someone about an incident in confidence you may contact the University Health Clinic and Counseling Center at 325-942-2173 or the ASU Crisis Helpline at 325-486-6345.

The Office of Title IX Compliance also provides accommodations related to pregnancy (such as communicating with your professors regarding medically necessary absences, modifications required because of pregnancy, etc.). If you are pregnant and need assistance or accommodations, please contact the Office of Title IX Compliance utilizing the information above.

For more information about Title IX in general you may visit www.angelo.edu/title-ix.

Student Absence for Observance of Religious Holy Days
A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. The full details can be found in ASU Operating Policy OP 10.19 Observance of Religious Holy Days.

Incomplete Grade Policy
It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 Grading Procedures for more information.

Student Conduct Policies

Academic Integrity
Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.

The College of Science and Engineering adheres to the Statement of Academic Integrity.
Plagiarism

Plagiarism is a serious topic covered in ASU’s Academic Integrity policy in the Student Handbook. Plagiarism is the action or practice of taking someone else’s work, idea, etc., and passing it off as one’s own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list.

Papers are subject to be evaluated for originality via Turnitin. Resources to help you understand this policy better are available at the ASU Writing Center.

Copyright Policy

Students officially enrolled in this course should make only one printed copy of the given articles and/or chapters. You are expressly prohibited from distributing or reproducing any portion of course readings in printed or electronic form without written permission from the copyright holders or publishers.

General Policies Related to this Course

- All students are required to follow the policies and procedures presented in these documents:
  - Angelo State University Student Handbook
  - Angelo State University Catalog
- In the event that the university is closed for a scheduled class time, whatever was scheduled for that day and/or whatever was due that day will be scheduled and/or due on the next scheduled class time.
- All electronic correspondence will be sent to your ASU e-mail account unless other arrangements are made.
- Feel free to come by my office at any time for help. I will definitely be near my office during my office hours (or there will be a note telling you when I will be back). If my office hours are not convenient for you, meet with me to arrange for another time that is more convenient.
- Good luck. I sincerely hope you do well in this course, and I strongly encourage you to use me as a resource outside of class to help you succeed.

All items contained in this syllabus are subject to change as the semester progresses. Students will be notified in advance of any changes.

Math 1332 Introduction to Contemporary Mathematics
Student Learning Outcomes

1. The students will demonstrate factual knowledge including the mathematical notation and terminology used in this course. Students will read, interpret, and use the vocabulary, symbolism, and basic definitions used in a selection from the following
topics: basic algebraic techniques, voting theory, apportionment, the mathematics of money, probability, statistics, graph theory, and geometry.

2. **The students will be able to describe generalizations of mathematics to real-world situations.** Students will be able to describe, for example, the role played by mathematics in the theory of voting. The students will be able to describe connections between mathematical concepts and natural and societal phenomena.

3. **The students will apply the course material along with techniques and procedures covered in this course to solve various problems and improve decision making.** The students will apply such topics related to statistics and probability to improve decision making through a broader understanding of mathematics. They will learn to analyze problems using mathematical ideas and symbolism and learn to obtain the appropriate resources required to better deal with such problems.

4. **The students will develop specific skills, competencies, and thought processes sufficient to support further study or work in this field or related fields.** Students will develop new approaches and algorithms for solving problems related to networking, scheduling and paths. Students will develop basic algebraic skills necessary for the support of their academic careers.

**Anticipated Daily Schedule**

The table below indicates the expected sections that will be discussed on the date listed. Student should refer to Blackboard announcements for changes or additions to this schedule.

<table>
<thead>
<tr>
<th>Day</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/8</td>
<td>Syllabus; Basic Elements of an Election, Preference Schedules Voting Methods: Plurality, Borda,</td>
</tr>
<tr>
<td>7/9</td>
<td>Plurality with Elimination, Pairwise Comparisons; Fairness Criteria; Weighted Voting</td>
</tr>
<tr>
<td>7/10</td>
<td>Banzoff Power; Shapley-Shubik ;Fair Division Games Fair Division Games; Sealed Bids</td>
</tr>
<tr>
<td>7/11</td>
<td>Sealed Bids; Apportionment</td>
</tr>
<tr>
<td>7/12</td>
<td>Review</td>
</tr>
<tr>
<td>7/15</td>
<td>Test 1</td>
</tr>
<tr>
<td>7/16</td>
<td>Introduction to Graphs; Hamilton’s Method; Street-Routing Problems; Introduction to Graphs; Euler's Theorem; Eulerizing Graphs; Traveling Salesman Problem Hamilton Paths &amp; Circuits; Brute Force Algorithm</td>
</tr>
<tr>
<td>7/17</td>
<td>Nearest Neighbor Algorithm; Networks and Trees</td>
</tr>
<tr>
<td>7/18</td>
<td>Spanning Trees; Kruskal’s Algorithm</td>
</tr>
<tr>
<td>7/22</td>
<td>Review</td>
</tr>
<tr>
<td>7/23</td>
<td>Test 2</td>
</tr>
<tr>
<td>7/24</td>
<td>Math of Finance Definitions; Math of Finance Packet 1: Simple Interest, Compound Interest</td>
</tr>
<tr>
<td>7/25</td>
<td>Math of Finance Packet 1: Simple Interest Compound Interest</td>
</tr>
<tr>
<td>7/26</td>
<td>Math of Finance Annuities Packet</td>
</tr>
<tr>
<td>7/29</td>
<td>Rigid Motions – Translations, Reflections, Rotations</td>
</tr>
<tr>
<td>Date</td>
<td>Event/Assignments</td>
</tr>
<tr>
<td>--------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>7/30</td>
<td>Review</td>
</tr>
<tr>
<td>7/31</td>
<td>Test 3</td>
</tr>
<tr>
<td>8/1</td>
<td>Frequency Tables; Graphs and Charts, Means, Medians and Percentile; Ranges and Standard Deviation</td>
</tr>
<tr>
<td>8/2</td>
<td>Ranges and Standard Deviation; Future Value Annuities; Advanced Transformations</td>
</tr>
<tr>
<td>8/5</td>
<td>Probability; Core Assessment; IDEA, Review for Final Exam</td>
</tr>
<tr>
<td>8/6</td>
<td>Review for Final Exam</td>
</tr>
<tr>
<td>8/7</td>
<td>Final Exam</td>
</tr>
</tbody>
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1. Blackboard page [http://blackboard.angelo.edu](http://blackboard.angelo.edu)
3. Grading Procedures: [http://www.angelo.edu/content/files/14197-op-1011-grading-procedures](http://www.angelo.edu/content/files/14197-op-1011-grading-procedures)
5. ASU Writing Center: [http://www.angelo.edu/dept/writing_center/academic_honesty.php](http://www.angelo.edu/dept/writing_center/academic_honesty.php)